

Mineral Industry Surveys

For information, contact:

Joyce A. Ober, Sulfur Commodity Specialist
U.S. Geological Survey
983 National Center
Reston, VA 20192
Telephone: (703) 648-7717, Fax: (703) 648-7757
E-mail: jober@usgs.gov

Raymond I. Eldridge III (Data)
Telephone: (703) 648-7793
Fax: (703) 648-7792
E-mail: reldridg@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SULFUR IN NOVEMBER 2004

During the month, production of recovered elemental sulfur was 778,000 metric tons, according to the U.S. Geological Survey. November production was 3% higher than that of October 2004 and about the same as that of November 2003. Shipments were about the same as those of October 2004. Producers' ending stocks for November 2004 were 198,000 tons.

Import and export data for November 2004 were not available at the time of publication and will be published in the Sulfur in December 2004 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for October 2004

were estimated to be 221,000 tons; exports were 84,000 tons. Imports of sulfuric acid for October 2004 were 215,000 tons; exports were 23,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts. Better strategies for estimating import data from Canada are being explored.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources
	Petroleum ²	Natural gas	Total	
2003:				
January-December	6,970	1,950	8,920	8,910
January-November	6,340	1,780	8,120	8,110
November	615	160	775	783
December	630	168	798	804
2004:				
January	577	165	742	762
February	523 ^r	155	678 ^r	689 ^r
March	598	176	774	783
April	610	161	771 ^r	770 ^r
May	609	170	780	775
June	615	163	778	778
July	648	173	820	812
August	651 ^r	172	823	837 ^r
September	595	155	750	754 ^r
October ^r	593	163	757	761
November ^p	614	164	778	759
Total	6,630	1,820	8,450	8,480

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³
2003:						
January-December	2,080	32,000	535	26,500	2,810	69,100
January-October	1,600	24,300	450	20,700	2,350	51,200
October	160	2,460	49	2,470	229	5,760
November	160	2,850	45	2,170	205	6,860
December	160	2,770	40	1,960	230	6,180
2004:						
January	178	1,720	50	2,400	265	5,850
February	167	3,130	35	3,050	232	7,930
March	178	3,660	25	2,570	223	7,210
April	180	3,060	54	2,550	279	8,040
May	187	2,830	57	2,680	272	6,880
June	180	2,560	49	2,440	247	5,980
July	166	2,790	54	2,550	257	7,150
August	166	2,050	35	1,780	227	5,290
September	161	2,460	49	2,620	241	6,850
October ^e	161	1,740	51	2,170	221	4,370
Total	1,720	23,900	459	24,800	2,460	65,500

^eEstimated.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentalSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2003:									
January-December	387	126	16,200	266	86	5,870	905	298	28,800
January-October	313	102	12,800	245	79	5,100	759	250	2,260
October	35	11	1,520	1	(4)	36	104	34	1,550
November	33	11	1,590	1	(4)	36 ^e	71	23	3,350
December	41	13	1,880	20	7	734	75	25	2,900
2004:									
January	97	32	3,930	--	--	--	114	37	4,610
February	179	58	7,480	21	7	488	204	69	8,450
March	167	54	6,760	6	2	163	176	58	7,280
April	203	66	7,710	14	5	344	221	72	8,410
May	190	62	7,230	22	7	555	222	72	8,120
June	166	54	6,350	11	3	247	192	63	7,860
July	160	52	5,660	10	3	357	172	56	6,230
August	133	43	4,920	33	11	937	194	63	6,250
September	150	49	5,080	29	9	1,090	206	67	6,480
October	176	57	6,450	19	6	946	215	70	7,480
Total	1,620	527	61,600	165	53	5,130	1,920	627	71,200

^eEstimated. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2003:					
January-December	742	46,100	207	68	18,800
January-October	647	27,300	184	60	16,300
October	72	4,360	12	4	1,200
November	27	4,880	12	4	1,170
December	67	3,920	12	4	1,360
2004:					
January	18	1,740	10	3	1,120
February	6	1,530	13	4	1,520
March	84	5,930	14	5	3,190
April	107	6,550	11	4	1,380
May	81	4,040	10	3	2,370
June	36	1,980	26	8	1,610
July	30	1,670	13	4	1,280
August	134	10,100	40	13	3,210
September	89	5,630	11	4	1,090
October	84	5,090	23	7	1,850
Total	669	44,300	171	55	18,600

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ^c	Consumption
2003:			
January-December	8,170	2,810	11,000
January-October	7,490	2,350	9,840
October	643	229	872
November	756	205	961
December	731	230	961
2004:			
January	744	265	1,010
February	683 ^r	232	915 ^r
March	699	223	922
April	663 ^r	279	942 ^r
May	694	272	966
June	742	247	989
July	782	257	1,040
August	703 ^r	227	930 ^r
September	665 ^r	241	906 ^r
October	677	221	898
Total	7,050	2,460	9,520

^cEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	November 2004 ^p		October 2004		Total 2004 ²		Year to date 2003 ^{r, 2}	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	19	18	17 ^r	17 ^r	215	219	207	209
Natural gas	2	2	2	1	19	19	23	24
Total	20	20	18 ^r	19 ^r	234	238	231	233
PAD 2:								
Petroleum and coke	81	82	78	77 ^r	813	828	831	821
Natural gas	4	3	4	4	39	39	40	40
Total	85	85	81 ^r	81 ^r	851	867	871	861
PAD 3: ³								
Petroleum and coke	406	390	394 ^r	398 ^r	4,370	4,380	4,020	4,050
Natural gas	43	42	40	43 ^r	464	436	565	561
Total	448	432	434	441	4,830	4,840	4,580	4,610
PAD 4 and 5: ⁴								
Petroleum and coke	109	108	105 ^r	103 ^r	1,240	1,240	1,280	1,250
Natural gas	116	115	117 ^r	117 ^r	1,300	1,290	1,150	1,150
California	84	82	72 ^r	71 ^r	932	926	983	965
Total	225	223	222 ^r	220 ^r	2,540	2,540	2,440	2,400
Grand total	778	759	757 ^r	761 ^r	8,450	8,480	8,120	8,110

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to prior months.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2004			2003
	November	October	Year to date	total
Production	9.49	8.94 ^r	9.23	8.92
Shipments	9.26	8.98 ^r	9.26	8.91
Exports of sulfur	NA	0.99	0.80	0.74
Imports of sulfur:				
Canada	NA	2.26 ^e	2.07 ^e	2.08
Mexico	NA	0.60	0.55	0.54
Total ²	NA	2.61 ^e	2.96 ^e	2.81
Export of H ₂ SO ₄	NA	0.27	0.21	0.21
Import of H ₂ SO ₄ :				
Canada	NA	2.08	1.95	0.39
Europe	NA	0.22	0.20	0.27
Total ²	NA	2.54	2.30	0.91
Consumption: ³				
Domestic sources	NA	7.99	8.46	8.18
Imports	NA	2.61 ^e	2.94 ^e	2.81
Total	NA	10.60	11.42	10.99
Sulfur export values ⁴	NA	\$61	\$66	\$62
Sulfur import values: ⁴				
Canada	NA	\$11	\$14	\$15
Mexico	NA	\$42	\$54	\$50
Average	NA	\$20	\$27	\$25
H ₂ SO ₄ export values ⁴	NA	\$81	\$109	\$91
H ₂ SO ₄ import values: ⁴				
Canada	NA	\$37	\$38	\$42
Europe	NA	\$50	\$31	\$22
Average	NA	\$35	\$37	\$32

^eEstimated. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Because September trade data were not available, September consumption was not determined.

⁴Average value per ton for most recent data available.